

**Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)**

**Progress Report:** FY 2015 Quarter 4 covering June 1, 2015 – August 31, 2015 (submitted September 11, 2015)

TASK	DELIVERABLE	DUE DATE	DATE SUBMITTED
<b>Note: Due Dates reflect approved 6-month extension of the project through February 28, 2016 as noted in revised Scope of Work. Additions or changes related to this extension are highlighted in yellow.</b>			
<b>Contract Executed September 18, 2012</b>			
1.2	Quarterly Progress Report FY13 Q-1 No. 1 Quarterly Progress Report FY13 Q-2 No. 2 Quarterly Progress Report FY13 Q-3 No. 3 Quarterly Progress Report FY13 Q-4 No. 4 Quarterly Progress Report FY14 Q-1 No. 5 Quarterly Progress Report FY14 Q-2 No. 6 Quarterly Progress Report FY14 Q-3 No. 7 Quarterly Progress Report FY14 Q-4 No. 8 Quarterly Progress Report FY15 Q-1 No. 9 Quarterly Progress Report FY15 Q-2 No. 10 Quarterly Progress Report FY15 Q-3 No. 11 Quarterly Progress Report FY15 Q-4 No. 12 Quarterly Progress Report FY16 Q-1 No. 13	Dec. 15, 2012 Mar. 15, 2013 Jun. 15, 2013 Sep. 15, 2013 Dec. 15, 2013 Mar. 15, 2014 Jun. 15, 2014 Sep. 15, 2014 Dec. 15, 2014 Mar. 15, 2015 Jun. 15, 2015 Sep. 15, 2015 Dec. 15, 2015	Dec. 14, 2012 Mar. 15, 2013 Jun. 14, 2013 Sep. 13, 2013 Dec. 13, 2013 Mar. 18, 2014 Jun. 11, 2014 Sep. 12, 2014 Dec. 15, 2015 Mar. 13, 2015 Jun. 11, 2015
1.3	Contract Communication Post-Award Meeting Post Award Meeting Minutes  Quarterly Communication Minutes	Oct., 18, 2012 Dec. 15, 2012  Quarterly with QPR	Held Sep. 21, 2012 at TCEQ Offices in Austin Submitted with Dec. 2012 QPR  July 16, 2015 TIAER and TCEQ PM had a conference call. A summary of items discussed at this meeting is included as Attachment #1.
1.4	Annual Report Article FY13 Annual Report Article FY14 Annual Report Article FY15	Upon Request Upon Request Upon Request	
1.5	Project Coordination Meeting with EPA	Sep 30, 2014	
2.1	QAPP Planning Meeting with City of Killeen	Oct. 18, 2012	Feb. 11, 2013 TIAER met with CoK in Killeen to discuss the QAPP and Monitoring plan drafts. Task Completed.

**Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)**  
**Progress Report:** FY 2015 Quarter 4 covering June 1, 2015 – August 31, 2015 (submitted September 11, 2015)

TASK	DELIVERABLE	DUE DATE	DATE SUBMITTED
2.2	Draft QAPP for Monitoring	Nov. 16, 2013	Feb. 22, 2013 - A draft Monitoring QAPP was sent to the TCEQ Project Manager for review. Received comments Mar. 28 and responded with final revision dated Apr. 17, 2013 and QAPP approved May 2, 2013. Task Completed.
2.3	Draft QAPP for Modeling	Nov. 16, 2013	Feb. 22, 2013 – A draft Modeling QAPP was sent to the TCEQ Project Manager for review. Received comment Apr. 4 and responded with final revision dated May 13, 2013 approved May 16, 2013. Task Completed.
2.4	QAPP Updates FY14  FY15	No less that 60 days prior to end of effective period	FY14 Annual revision to Monitoring QAPP approved Mar. 6, 2014.  FY14 Annual certification for Modeling QAPP approved Feb. 12, 2014.  FY15 Annual certification for Monitoring and Modeling QAPPs approved Feb. 6, 2015.
2.5	QAPP Amendments Draft Note: A QAPP Expedited Amendment will be submitted for both the modeling and monitoring QAPP, which addresses the 6-month project extension once the contract has been amended between TCEQ and TIAER.  QAPP Amendments Final	As needed  As needed	No activity this quarter
2.6	Data Submittals (quarterly data submittals requested by TCEQ PM)  Note: Data collection will be completed in June 2015 even with the project extension, so the last data submittal will occur in August 2015 as originally scheduled.	Mar. 15, 2013 Jun. 15, 2013 Sep. 15, 2013 Dec. 15, 2013 Mar. 15, 2014 Jun. 15, 2014 Sep. 15, 2014 Dec. 15, 2014 Mar. 15, 2015 Jun. 15, 2015 Aug. 15, 2015	Data collection started in May 2013 with approval of monitoring QAPP. First data submittal sent Sep. 13, 2013. Second submittal sent Dec. 16, 2013 Third submittal sent Mar. 12, 2014 Forth submittal Jun. 13, 2014 Fifth submittal Sep. 10, 2014 Sixth submittal Dec. 11, 2014 Seventh submittal Mar. 9, 2015 Eighth submittal Jun. 11, 2015 Final Data submittal Jul. 22, 2015

**Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)**  
**Progress Report:** FY 2015 Quarter 4 covering June 1, 2015 – August 31, 2015 (submitted September 11, 2015)

<b>TASK</b>	<b>DELIVERABLE</b>	<b>DUE DATE</b>	<b>DATE SUBMITTED</b>
3.1	Draft PPP	Dec. 15, 2012	Feb. 25, 2013 – Submitted to TCEQ PM Mar. 4, 2013 – PPP approved by TCEQ PM.
	Final PPP	Mar. 15, 2013	Mar. 5, 2013 – Distributed final PPP in PDF form to project partners and TCEQ PM.
3.2 – 3.5	Stakeholder Group Development, Activities, Meetings and Project Dissemination	Bi-annually	Last public stakeholder meeting held Sep. 25, 2014.
3.6	Draft Building Partnerships – Element E, Part A Report	Mar. 15, 2013	Mar. 4, 2013 – TCEQ PM gave final approval of PPP and approved document was sent in PDF form to project partners. To be updated as needed.
	Final Building Partner ships – Element E, Part A Report	Aug. 15, 2015 Jan. 29, 2016	
4.1-4.2	Inventory of existing data and GIS representation for watershed in shapefile or ArcGIS grid format	Revised due date Dec. 5, 2014	Draft report completed and delivered to TCEQ Dec. 5, 2014 with maps of GIS data for the watershed.
4.3	Draft Watershed Characterization Report (Data Inventory Report)	Revised due date Dec. 5, 2014	Draft completed and delivered to TCEQ Dec. 5, 2014. Comments received from TCEQ Jan. 12, 2015.  Extension requested for final report. Revisions submitted 28May2015 to TCEQ with response to comments. Further revision requested based on comments to Source Survey Report received June 16, 2015. Modified version sent July 14, 2015 and approved by TCEQ July 17, 2015.
	Final Watershed Characterization Report (Data Inventory Report)	Revised due date Feb. 20, 2015 Apr. 15, 2015 May 28, 2015	
5.2	Draft Water Quality Monitoring Plan	Nov. 16, 2012	Reconnaissance and planning meeting held between TIAER and CoK Jan. 18, 2013
	Final Water Quality Monitoring Plan	Dec. 15, 2012	Submitted to TCEQ PM for review Feb. 22, 2013 and approved Mar. 8, 2013. Task Completed.
5.3	Source Survey Technical Report	Dec. 15, 2014	Draft completed and delivered to TCEQ Dec. 15, 2014.  Comments received from TCEQ Jan. 28, 2015. Revisions and response to comments submitted to TCEQ May 28, 2015. Further

**Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)**  
**Progress Report:** FY 2015 Quarter 4 covering June 1, 2015 – August 31, 2015 (submitted September 11, 2015)

TASK	DELIVERABLE	DUE DATE	DATE SUBMITTED
			comments received June 16, 2015. Modified version sent July 3, 2015 and approved by TCEQ July 7, 2015.
5.5	Draft Watershed Characterization – Phase 2 Report (Monitoring Report) Final Watershed Characterization – Phase 2 Report (Monitoring Report)	Revised due date <del>Apr. 15, 2015</del> Aug. 31, 2015 <del>Jun. 15, 2015</del> Nov. 30, 2015	Draft submitted to TCEQ Sep. 10, 2015
6.2	Watershed maps that identify potential cause and sources of water quality problems	<del>Jun. 15, 2015</del> Jul. 31, 2015	Extension to Aug. 31 requested in quarterly conference call on July 16 as noted in Attachment #1. Deliverable submitted as part of Loading Report on Aug. 31, 2015.
6.5	Draft Watershed Characterization Phase 3 Report with Loadings Final Watershed Characterization Phase 3 Report with Loadings	<del>June 15, 2015</del> Jul. 31, 2015  <del>Jul. 15, 2015</del> Nov. 30, 2015	Extension to Aug. 31 requested in quarterly conference call on July 16 as noted in Attachment #1. Submitted Aug. 31, 2015
7.1	Define Education Goals	Mar. 15, 2013	Strategies for reaching targeted audience outlined in PPP
7.2	Identify Target Audience	Mar. 15, 2013	Target audience identified in PPP
7.3	Design Implementation Measures	Mar. 15, 2013	Identified in PPP
7.4	Evaluate Education and Outreach Program FY13 FY14 FY15	Sep. 15, 2013 Sep. 15, 2014 Sep. 15, 2015	
7.5	Draft Information & Education Plan Report Final Information & Education Plan Report	<del>Jun. 15, 2015</del> Oct. 30, 2015 <del>Jul. 15, 2015</del> Nov. 30, 2015	
8.1- 8.2	Draft Project Report Final Project Report	<del>Jul. 15, 2015</del> Dec. 18, 2015 <del>Aug. 15, 2015</del> Feb. 28, 2015	

### GENERAL COMMENTS

TASK	COMMENTS/ACTIVITIES
<b>1. Project Administration</b>	Project administrative duties occurred as needed including emails, quarterly communication, development of quarterly progress reports and reimbursement requests. Invoicing issues for reimbursement of project expenses are an on-going issue that is being worked out between TCEQ and Sponsored Research Service (SRS) with the Texas A&M University System, which now handles TIAER invoicing.
<b>2. Quality Assurance</b>	No changes needed to QAPP. Eighth data submittal occurred on June 11, 2015 and the Final Data submittal occurred on July 22, 2015. All direct water quality data have now been submitted to TCEQ for SWQMIS.
<b>3. Building Partnerships</b>	Next public meeting scheduled for October 8, 2015 at the City of Killeen Transportation Training Room, 3201 –A S. W.S. Young Drive, Killeen, TX 76542 (proposed time 6 to 8 pm, although this may shift a bit)
<b>4. Watershed Characterization – Data Inventory</b>	Received further comments from TCEQ. Responses provided and report approved by TCEQ July 17, 2015.
<b>5. Watershed Characterization – Data Collection and Analysis</b>	<p>Monitoring for the project was completed on June 10, 2015 with the last scheduled monthly monitoring event.(see Table 1 at the end of the General Comments Section). No storm monitoring was planned or conducted this quarter. There were no additional Corrective Action Reports or Corrective Action Plans issued. The Corrective Action Status was updated to indicate closure on Corrective Action Plans (see Table 2).</p> <p>Draft Watershed Characterization – Phase 2 Report prepared (also known as the “Monitoring Data Report”) and submitted to TCEQ for review Sep. 10, 2015.</p>
<b>6. Identification of Causes and Sources of Pollution and Estimation of Pollutant Loads</b>	Draft “Loadings Report” with SELECT and LDCs completed and submitted to TCEQ for review August 31, 2015.
<b>7. Information and Education Component</b>	Working on Draft Information & Education Plan Report, which is due the end of October.
<b>8. Project Report</b>	No activity to report

**Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)**

**Progress Report:** FY 2015 Quarter 4 covering June 1, 2015 – August 31, 2015 (submitted September 11, 2015)

**Table 1. Routine Monthly Monitoring for June 2015. Number of samples and comments, as applicable.**

Collection Date	TCEQ Station ID	Sonde	Nutrients & TSS	<i>E. coli</i>	Flow	Comments
10Jun2015	11915	1	1	1	1	
10Jun2015	18828	1	1	1	1	
10Jun2015	21436	1	1	1	1	
10Jun2015	18827	1	1	1	1	
10Jun2015	21437	1	1	1	1	
10Jun2015	11913	1	1	1	1	
10Jun2015	11911	1	1	1	1	
10Jun2015	11910	1	1	1	1	
10Jun2015	11908	1	1	1	1	
10Jun2015	11905	1	1	1	1	
10Jun2015	14237	1	1	1	1	

Sonde data includes dissolved oxygen, specific conductance, pH, and water temperature.

Nutrients include nitrite-nitrogen + nitrate-nitrogen (NO<sub>2</sub>-N+NO<sub>3</sub>-N, dissolved), total Kjeldahl nitrogen (TKN), orthophosphate-phosphorus (OPO<sub>4</sub>-P, dissolved), and total phosphorus (TP).

**Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)**

**Progress Report:** FY 2015 Quarter 4 covering June 1, 2015 – August 31, 2015 (submitted September 11, 2015)

**Table 2**  
**Corrective Action Status Table**

<b>Corrective Action # (CARs)</b>	<b>Date Issued (CAP)</b>	<b>Description of Deficiency</b>	<b>Action Taken</b>	<b>Date Closed</b>
1 (CARs 13-0092 & 13-0105)	06Sep2013	Matrix spike beyond recovery limits (NO <sub>2</sub> -N+NO <sub>3</sub> -N & TKN)	Associated sample data to be flagged with “SR” in data submittal. No specific corrective action identified. Lab will continue to monitor for trends.	01Oct2013
2 (CAR 13-0097)	06Sep2013	Quanti-Tray comparator for <i>E. coli</i> analysis was used past expiration	Expired comparator was checked against new comparator. Added comparator expiration date to monthly maintenance check schedule.	10Jan2014
3 (CAR 13-0101)	06Sep2013	Field filtration of NO <sub>2</sub> -N+NO <sub>3</sub> -N and PO <sub>4</sub> -P was unable to occur.	Field crew directed to use alternative parameter codes as outlined in the QAPP. Field personnel reminded to verify that loaded equipment matches the items on the equipment check list, which is located in the Nolan field notebooks.	03Sep2013
4 (CARs 13-0137 & 13-0138)	12Dec2013	Matrix spike beyond recovery limits (NO <sub>2</sub> -N+NO <sub>3</sub> -N & PO <sub>4</sub> -P)	Associated sample data to be flagged with “SR” in data submittal. No specific corrective action identified. Lab will continue to monitor for trends.	13Jan2014
5 (CARs 14-0022, 14-0031 & 14-0038)	05Jun2014	Matrix spike beyond recovery limits (PO <sub>4</sub> -P, NO <sub>2</sub> -N+NO <sub>3</sub> -N & TKN)	Associated sample data to be flagged with “SR” in data submittal. No specific corrective action identified. Lab will continue to monitor for trends.	09Jun2014
6 (CAR 14-0031)	05Jun2014	Sonde incorrectly calibrated for specific conductance	Field personnel instructed to review calibration procedures prior to next monitoring event. Data omission to be noted with data submittal.	27May2014
7 (CARs 14-0045, 14-0046 & 14-0047)	05Sep2014	RPD for field split greater than 30% for TKN	Associated sample data flagged with “SP” in data submittal. Historical data reviewed in comparison to sample values to determine acceptability for project objectives.	12Jun2014
8 (CARs 14-0089 & 14-	09Dec2014	Matrix spike beyond recovery limits (NO <sub>2</sub> -N+NO <sub>3</sub> -N)	Associated sample data flagged with “SR” in data submittal.	09Dec2014

**Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)**

**Progress Report:** FY 2015 Quarter 4 covering June 1, 2015 – August 31, 2015 (submitted September 11, 2015)

<b>Corrective Action # (CARs)</b>	<b>Date Issued (CAP)</b>	<b>Description of Deficiency</b>	<b>Action Taken</b>	<b>Date Closed</b>
0100)			Historical data reviewed in comparison to sample values to determine acceptability for project objectives.	
9 (CAR 14-0101)	09Dec2014	RPD for field split greater than 30% for TKN	Associated sample data flagged with “SP” in data submittal. Historical data reviewed in comparison to sample values to determine acceptability for project objectives.	09Dec2014
10 (CAR 15-0008)	10Mar2015	Matrix spike beyond recovery limits (NO <sub>2</sub> -N+NO <sub>3</sub> -N)	Associated sample data flagged with “SR” in data submittal. Historical data reviewed in comparison to sample values to determine acceptability for project objectives.	25Feb2015
11 (CAR 15-0018)	10Mar2015	RPD for field split greater than 30% for TKN	Associated sample data flagged with “SP” in data submittal. Historical data reviewed in comparison to sample values to determine acceptability for project objectives.	09Mar2015
15-0041& CAP #11	08Jun2015	Matrix spike beyond recovery limits for NO <sub>2</sub> -N_NO <sub>3</sub> -N	Flag data with “SR” for data submittal. Historical data reviewed in comparison to sample values to determine acceptability for project objectives.	10Jun2015
15-0073 & CAP #12	08Jun2015	LCS recovery less than 80% for batch for TSS	Other QC reviewed and passed. Historical data reviewed in comparison to sample values to determine acceptability for project objectives.	17Jul2015



**Attachment #1  
Minutes from Quarterly Project Communication**

**Nolan Creek Project Conference Call – Minutes**

**Date:** Thursday, July 16, 2015

**Time:** 9:30 – 9:50 am

**Participants:** Anne McFarland - TIAER

Leah Taylor - TIAER

Megan Wilson – TCEQ

Arthur Talley – TCEQ

**Topics Discussed:**

Invoicing – Update from Anne – The last invoice paid covers through May 2014. All invoices to date have been submitted to TCEQ. SRS and TCEQ have established weekly meetings to discuss and resolve invoicing issues.

Budget – Anne indicated that there will be a need for a no-cost, budget amendment moving money between categories. Megan noted that this should remain less than 10% of the contract. With the 6-month extension now approved, Anne is working on revising TIAER's subcontract with the City of Killeen, which will be reduced some.

QAPP Amendment – Anne noted that as she is working on the SELECT modeling portion of the project that there are some data sources that are varying from what is listed in the QAPP. She will be putting together an amendment for the QAPP to reflect this. Megan indicated that she thought this could be an expedited amendment and will follow up with staff at TCEQ to make sure. *(Note: In an email to TCEQ PM dated July 17, 2015, Anne retracted this indication that data sources were being used that varied from those listed in the QAPP. She was mistaken in how she read some of the information in Table B9.1 Non-Direct Data Types and Data Sources. A QAPP amendment is not needed.)*

Monitoring – Anne McFarland noted that water quality monitoring for the project was complete in June. Samples have been processed by the lab but are still undergoing QA/QC review. The last data submittal for the project should occur in August.

Update on Reports:

- PPP (Task 3.6) – Report approved back in 2013, but to be updated, as needed.
- Data Inventory (Task 4.3) & Source Survey (Task 5.3) Reports – These have now been approved by TCEQ and will be made available for public review.
- Monitoring Report (Task 5.5) – on schedule for draft to TCEQ by August 31
- Loadings Report (SELECT & LDCs – Task 6.5) – Anne requested a one-month extension until August 31 for this report. Megan, as the TCEQ PM, verbally approved this extension.
- Information & Education Plan Report (Task 7.5) – currently being worked on by Leah and is on schedule for completion by or before October 30.
- Final project report (Task 8) – goal of completion by December 18 still the target.

**Texas Institute for Applied Environmental Research: Assessment of Water Quality and Watershed Based Planning for Nolan Creek/South Nolan Creek (58-13-30061)**

**Progress Report:** FY 2015 Quarter 4 covering June 1, 2015 – August 31, 2015 (submitted September 11, 2015)

Next Stakeholder Meeting – The timing of the next stakeholder meeting was discussed. Anne anticipates this occur in late August/early September timeframe and noted that she needs to give TCEQ three weeks prior notice and plans to do so. Due to travel commitments in August, the next stakeholder meeting likely will occur in September. At the meeting the Data Inventory and Source Survey reports would be presented for public review. Also, Anne plans to present preliminary SELECT and LDC results.

Start of the FY15 Project (WPP): Discussed a start date of March 1, 2016, so there would not be administrative overlap between the two projects. Arthur and Megan will discuss this with TCEQ NPS staff.